IN THE CLAIMS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A method of filtering at least two series of seismic data representative of the same zone, the method being characterized by determining a cross variogram of these data series and solving ~~the~~ a co-kriging equation which results from this determination for automatically deducing an estimate of the component that is common to the data series, and from the estimate, resolving each of the data series into the sum of their common component and orthogonal residues, said resolution of the data series being used for determining the topography of the subsoil.

Claim 2 (canceled).

Claim 3 (previously presented): A method according to claim 2, characterized by determining the orthogonal residues for the various data series by subtracting the estimated common component from each of the data series.

Claim 4 (previously presented): A method according to claim 3, characterized by implementing kriging analysis to resolve said orthogonal residues.

Claim 5 (currently amended): A method of processing seismic data, comprising:

comparing two series of seismic data corresponding, for the same zone, to grids of at least one common attribute obtained at two distinct values of at least one given parameter, said comparing including filtering at least two series of data representative of the same zone by determining a cross variogram of these data series and solving ~~the~~ a co-kriging equation which results from this determination for automatically deducing an estimate of the component that is common to the data series, and from the estimate, resolving each of the data series into the sum of their common component and orthogonal residues.

Claim 6 (original): A method of filtering at least one series of seismic data representative of at least one zone, the method being characterized by identifying a model of a component of three-dimensional variability of its variogram, subtracting said model from the experimental variogram, and solving the kriging equation corresponding to the different variograms in order to deduce an estimate of the corresponding variability component on the data series.

Claim 7 (currently amended): A method of processing seismic data, comprising:

comparing two series of seismic data corresponding, for the same zone, to grids of at least one common attribute obtained at two different instants, said comparing including filtering at least two series of seismic data representative of the same zone by determining a cross variogram of these data series and solving ~~the~~ a co-kriging equation which results from this determination for automatically deducing an estimate of the component that is common to the data series, and from the estimate, resolving each of the data series into the sum of their common component and orthogonal residues.

Claim 8 (original): A method according to claim 1, characterized by determining the orthogonal residues for the various data series by subtracting the estimated common component from each of the data series.

Claim 9 (original): A method according to claim 8, characterized by implementing kriging analysis to resolve said orthogonal residues.

Claim 10 (canceled).

Claim 11 (original): A method according to claim 5, characterized by determining the orthogonal residues for the various data series by subtracting the estimated common component from each of the data series.

Claim 12 (original): A method according to claim 11, characterized by implementing kriging analysis to resolve said orthogonal residues.

Claim 13 (canceled).

Claim 14 (original): A method according to claim 7, characterized by determining the orthogonal residues for the various data series by subtracting the estimated common component from each of the data series.

Claim 15 (original): A method according to claim 14, characterized by implementing kriging analysis to resolve said orthogonal residues.

Claim Objections

Claim 1 stands objected to because it recites the limitation "the co-kriging equation" in line 3. The Office states there is insufficient antecedent basis for this limitation in the claim. In response, applicant has amended claim 1 to include appropriate antecedent basis.

Claims 5 and 7 stand objected to because it recites the limitation "the co-kriging equation" in line 5. The Office states there is insufficient antecedent basis for this limitation in the claim. In response, applicant has appropriately amended claims 5 and7.

Claims 2, 10 and 13 stand objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In response, applicant has canceled claims 2, 10 and 13.